Reconciling Navier-Stokes Inequality: Delay Between Introduction of Heat and Pressure Response - Four Spatial and Four Energetic Dimensions in Which Gravity is Prerequisite for All Other Entropic Effects

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Introduction

Although some of the information to be included here has been included in previous writings, it was suggested that I address Navier-Stokes as it is considered to be one of the seven most important problems in mathematics. Although The Clay Mathematics Institute claims to be offering a $1,000,000 award to anyone who can integrate Navier's and Stokes' work in a three-dimensional context, we will just have to see if they actually bother to track me down to give me my prize. As my writings are rarely formatted in "mathematician-friendly" terms but rather in plain English, it is unlikely that my ideas would qualify for attention from the folks who know the secret handshake.

I do not personally consider the question of integrating Navier-Stokes to be of any particular practical usefulness given the ingredient of chaos (much of it coming from dimensions not known to exist by either Navier or Stokes.) Although it has been pointed out that weather forecasting is one important practical application for modeling fluid dynamics, it should be noted that chaos is not the primary antagonist of accurate weather forecasts; it is a lack of a complete atmospheric snapshot from which to begin model runs. In previous publications, I pointed out that rapidly cooling air-masses (much like rapidly cooling lava) can take on geometric shapes which are not considered by any current weather models. Solar weather forecasting is not factored into current weather models. All of these things adversely impact the accuracy of weather forecast models more than the ingredient of quantum chaos, which is not to say that quantum chaos does not come into play.

To be able to accurately project the position of matter as it goes through entropy a la Laplace's Demon, one would need to take into account all dimensions. As Stokes' work assumes a Universe with three spatial dimensions, there is no possibility that his model could be reconciled with the true physical dynamics of any fluid. In this publication, I will make an argument for a Universe in which there are eight dimensions, half of which are spatial and half of which are energetic. I cannot say with certitude that someone will not discover even greater numbers of dimensions, but I do not believe that we should expect to find 11 dimensions (as per Einstein) without any viable candidate dimensions beyond eight based upon the timeless logic that "Einstein cannot be wrong." As far as this author is concerned, we live in an eight-dimensional universe for the reasons which I will presently delineate.

A reader familiar with my work will best appreciate this corollary given that my own model makes a number of revisions to the Standard Model which I do not care to enumerate in their entirety here for the sake of brevity. I will, however, briefly summarize those aspects relevant to the Navier-Stokes inequality issue and explain why it is that an inequality exists in the first place, for the sake of good sport.

Abstract

If we wish to create a model in which the magnitude and quality of chaos can be objectively evaluated in support of improved stochastic models (which, no matter how well-calibrated, cannot predict the future without the sort of total knowledge of all matter and energy in all dimensions) then we must take into account the full specrum of sources of chaos and how they manifest themselves in physical systems. A stochastic model predicting chaos in fluid dynamics could certainly be improved through a better understanding of to what extent chaos plays a role in macro-scale systems over which periods of time.

There are some important differences between my own model of physics and the currently accepted Standard Model, particularly as it relates to what is considered a dimension and the importance of certain forces in driving observed phenomena. I will attempt to tersely summarize those points where the Standard Model is in need of revision:

Time as a Spatial Dimension

In order to make sense of physical dynamics, time must be treated by physicists as a spatial dimension unrelated to entropy. Just as physical matter has a property of height, width and depth, physical matter could be expected to have dimension of time, as well. This author has identified the primary governing factor which dictates a molecule's "temporal footprint" to be Higgs Asymmetry induced by the close collocation of elements of varying atomic weights within compounds. The fulcrum point of any molecule's temporal footprint is always centered upon the "present moment." These footprints vary in width and cause molecules to have a presence in the apparent past and the apparent future in addition to the present. Molecules made of a single atom as well as molecules made of multiple atoms of the same element (common examples include O2, N2, H2) would have an extremely narrow footprint, but compounds which combine heavy and lightweight elements, particularly when closely constricted, have wider footprints. This means that influences can be translated through these molecules (i.e. they are Einstein-Rosen Bridges) and can introduce greater than average degrees of chaos into traditional three-dimensional fluidic systems. This is highly germane to weather forecasting given that water vapor would, according to this theory, have a wide footprint when compared with N2 and O2, which make up the bulk of the atmosphere and water vapor exists primarily in the lower atmosphere. Temporally-related chaos, to the extent that it is a factor in atmospheric fluid dynamic chaos, could be predicted to be greatest near the surface of the Earth and to decrease as one gets farther from the surface.

Inverse-mass neutrinos, according to previous publications from this author, are also capable of introducing chaos to traditional fluidic systems as their mass can re-invert so as to enable gravitational influence on the property of electron spin, which can, in turn, be measured. These influences can also be measured when valence electrons of rubidium are modified prior to electron duplication events which are heavily influenced by the nuclear oscillatory dynamics of that particular element.

Entanglement as a Dimension

Entanglement between distant molecules introduces an extremely unpredictable element to any multi-dimensional fluid dynamic. Entanglement (not unlike a social network) is not limited to exclusively matched pairs. One particle can be made to control the properties, of dozens, hundreds, or thousands of slaved nodes. Those slaved nodes can, in turn, control subordinate nodes. If they are, themselves, slaved to a different node, their ability to reliably control a directly slaved node would seem, to the untrained observer, to be unreliable. In terms of naturally-occurring entanglement, a system of complex inter-dependent linkages would appear to most observers to be absolutely chaotic. This may be the reason why stochastic models are fairly good at approximating the effects of chaos on particles in a fluid.

Temperature as a Dimension

Although Navier-Stokes certainly addresses temperature as a variable in their equation and acknowledges the existence of temperature, existing literature does not refer to temperature as a dimension, but rather as a property.

Today, we have a better understanding of the precise sub-atomic dynamics that define relative temperature and understand that temperature drives entropy, as do the other four entropic dimensions. The presence of heat in a system leads to an increase in pressure, as was accounted for in Navier-Stokes. However, there is a hysteresis of that effect not accounted for in that equation. Aside from this, heat increases the likelihood of the spontaneous emission of light, which was never considered by Navier or Stokes. Pressure gradients created by the introduction of heat lead to the generation of phononic currents, which result in some of the introduced heat being carried away almost immediately. This, too, was not included in the Navier-Stokes equation. *This may be the source of the Navier-Stokes inequality. Accounting for it could lead to the creation of mathematically consistent three-dimensional fluidic model.* This is not the end of the deficiencies, however, if one desires a formula capable of accounting for the dynamics of eight, rather than three dimensions. Navier-Stokes, furthermore, accounts for only two forms of cooling, which is less than the currently accepted three and is only half of the four forms of cooling in my own model. Navier-Stokes does not account for radiational cooling of heated bodies and certainly does not account for gravity-driven cooling, which is one of my many unique contributions to our understanding of physics.

Velocity as a Dimension

Velocity of objects within a fluid is one ingredient taken into consideration in Navier-Stokes, but it, like Temperature, is never referred to as a dimension. Velocity has traditionally been considered a property, but this classification is fallacious. I can say this much with certitude for reason that a particle undergoes no physical change which causes its velocity to change. The new velocity of a particle, as per Newtonian Momentum, is based upon its previous velocity, which continues to remain constant unless an outside force changes it. Under my own model, motion of all sorts requires gravity (the most important instigator of entropy and a dimension in its own right) and momentum includes a subtle propulsive element which results in a nearly imperceptible increase to velocity rather than mere maintenance of it within a vacuum. The extent to which velocity is gradually increased by self-generated gravity depends upon the relative velocity (this effect is most marginal at speeds of less than one percent of the speed of light but is quite dramatic at higher velocities.)

The same gravity fields which enable motion and add an ingredient of propulsive force to base momentum also drive a form of cooling not currently taken into consideration in models of fluid dynamics. Velocity could be expected to negate some of these cooling effects, as does elemental composition (this cooling effect is not present in uranium, for example, explaining its thermal momentum.) At relativistic velocities, we might expect lighter elements to have a greater thermal momentum and to have increased need for active cooling.

Positivity of Electrical Charge/Gravity as a Dimension

As explained in a previous publication, all of motion is based upon the principle of displacement. Without gravity, there could be no motion and no entropy.

Just as height, width, and depth might be diagrammed as subordinate to time (as that which does not exist in time does not exist in space) the energetic dimensions of entanglement, temperature and velocity rightly ought to be diagrammed as subordinate to gravity as without gravity, these other forms of motion could not proceed.

Although the effect of neutrino-bias induced acceleration is a negligible one when considering conventional fluid dynamics, it is undeniable. Positivity of electrical charge at the micro- scale can increase microgravity and can therefore affect the behavior of fluidic systems at the micro- scale. Another noteworthy example of a subtle but unaccounted-for dynamic is the absence of gravity generated by neutrons in isolation, but the presence of gravitational fields provoked by the presence of positrons in isolation. At the nano- scale, gravity fields are highly chaotic given that only protons and other positively charged particles can generate gravity influx. This, too, is an important and needed

addendum to our Standard Model, which erroneously links gravity to mass rather than to positive electrical charge.

Conclusion

Objective characterization of average chaos in systems of different scales over different time periods is possible, but only by taking into account the preceding factors. *A general improvement to Navier-Stokes modeling in merely three dimensions is possible through the proper accounting of heat-pressure hysteresis.* As increasing heat does not result in an instantaneous increase in pressure, models which assume a simultaneous increase will be mathematically inconsistent. By the same token, Navier-Stokes models, if they are to be "proven," must, in addition to allowing for heat-pressure hysteresis, be amended to include, as mentioned above, an allowance for a heat-transport effect associated with the projection of the pressure waves themselves. As pressure gradients inevitably lead to the generation of phonons, which are heat carriers, heat is transported by these phononic currents in a way not accounted for by Navier-Stokes as-is.

Appendix:

Diagram of 8 Dimensions **Simon Edwards**

Spatial Dimensions

Time (1)

Heighth (2) **Breadth (2)** **Depth (3)**

Energetic/Entropic Dimensions

Gravity (5)

Temperature (6) **Velocity (7)** **Entanglement (8)**